

REMARKS/ARGUMENTS

Claims 16, 18-20, 24, 27 and 28 are active in this application.

The claims have been amended to define the C₂₋₅ alkoxylates as ethoxylates as described in the specification on page 5, lines 30-34 and to specify the C₄₋₆ alkylglycols or diglycols as described on page 6, lines 22-23. Claim 16 is also amended to incorporate the limitations of Claim 17 (see also, page 8, lines 30-31).

No new matter is believed to have been added by these amendments.

As apparent from Claim 16, the claims are directed to a mixture of ethoxylates of C₄₋₆-alkylglycols -or diglycols. This mixture provides a positive effect on wetting ability of wetting auxiliaries even in dilute systems and for increasing the solubility of wetting auxiliaries and aqueous formulations comprising nonanionic surfactants.

Indeed, the examples presented in the specification demonstrate the advantageous behavior of the mixture being claimed. In the examples starting on page 13 there are presented two examples; Example 1 and Example 2.

Example 2 shows that the specific mixture of Claim 16 makes it possible to achieve an interfacial tension of 43 mN/m in only 0.2 seconds (formulation B) whereas comparative formulation (A) with the same composition but for cumene sulphonate used in place of hexyl glycol ethoxylate with a degree of ethoxylation of 4. Formulation A in equilibrium yielded an interfacial tension of 50 mN/m after 0.5 seconds.

This Example shows that formulation B (as in the claims) has advantages over formulation A in its static and dynamic properties.

The paper finishing example on pages 14-15 shows that the inventive alkylglycol alkoxylates significantly improve the uniformity of an image that is printed on a treated paper (as outlined in the table on page 15).

One of the criticisms raised in the Advisory Action was that the data presented in the specification was not commensurate with what was claimed. From the amendments submitted it should be apparent that the claims are now commensurate in scope with what is claimed.

In Example 1:

- Ethoxylate:
 - An aqueous solution of C₁₃₋₁₅ oxoalcohol ethoxylate with an average degree of ethoxylation of 7 is studied.
 - Also, a hexylglycol ethoxylate with an average degree of ethoxylation of 4 is added.
 - This mixture of C₁₃₋₁₅ oxoalcohol ethoxylate has an average degree of ethoxylation of 4.
 - Claim 16 specifies: a mixture of ethoxylates of C₄₋₆-alkylglycols -or diglycols
- Surfactant
 - Claim 16 specifies: the surfactants are nonionic surfactants and are chosen from ethoxylates of C₉₋₂₀-alkanols which, on average, have a degree of ethoxylation of from 3 to 30, and mixtures thereof.
 - Page 13, lines 28-32 describes a mixture of lauryl (12 carbons) alcohol ethoxylate with an average degree of ethoxylation of 8 and a hexylglycol ethoxylate with an average degree of ethoxylation of 4.
 - This is an example of what is described in Example 1.

Example 2:

- Formulation B is a mixture of dehydroxyaline and hexylglycol ethoxylate with a degree of ethoxylation of 4.

- Claim 16 specifies: a mixture of ethoxylates of C₄₋₆-alkylglycols -or diglycols

Evers describe compositions with at least one long-chain surfactant, which are stabilized by the additional presence of short-chain surfactants. On page 2, line 58 to page 3, line 19 suitable long-chain surfactants are C₁₁-C₂₄ alkyl sulphates, alkyl ether sulphates, alkyl sulphonates, alkyl succinates, alkyl carboxylates, alkyl ether carboxylates, alkyl sarcosinates, sulphosuccinates, amine oxides, glucose amides, alkyl pyrrolidones, alkyl polysaccharides, alkyl alkoxyates and betaines. The Evers compositions can also have at least one short-chain surfactant, or mixtures thereof (page 3, lines 20 to 25 of Evers). The short-chain surfactants is the same as the long-chain surfactants except that the alkyl group as hydrophobic portion is a C₆ to C₁₀ alkyl group.

In the Advisory Action, the Examples (I to VIII) are referenced as a basis to maintain the Evers rejections.

However, Evers describes mixtures of C₁₂₋₁₅ alkylethoxylates having a degree of ethoxylation of 3 to 30 combined with C₈ alkyl sulfate, C₈ alkylsulfate or C₈ alkylethoxylate having a degree of ethoxylation of 6 or C_{7/9} alkylethoxylate having a degree of ethoxylation of 6.

As already explained above, Claim 16 includes: “ethoxylates of C₄₋₆-alkylglycols -or diglycols which, on average, have a degree of ethoxylation of from 1 to 8 based on the C₄₋₆ alkylglycols or -diglycols.” Such a mixture is not described by Evers.

Evers provides no disclosure or otherwise suggests that the specific mixture as set forth in claim 16 yields improved static and dynamic properties to aqueous solutions (see Example 2 and the discussion above).

Therefore, the claims are not anticipated by Evers because Evers describes a different composition. The claims would also not have been obvious because Evers provides no suggestion for the mixture as claimed.

Withdrawal of the rejections based on Evers is requested.

Turning to Oldenhove.

Oldenhove in Examples 1A and 1C-G include diethylenglycolbutyleneether and triethylenglycolhexyl ether along with heptylacetate, nonylacetate, 4-heptanon, 2-undecanone, octane, glutaric acid, and/or sodium benzoate.

This is not a mixture of ethoxylates of C₄₋₆-alkylglycols -or diglycols which, on average, have a degree of ethoxylation of from 1 to 8 based on the C₄₋₆ alkylglycols or -diglycols, and nonionic surfactants chosen from ethoxylates of C₉₋₂₀-alkanols as set forth in claim 16.

Therefore, the claims are not anticipated by Oldenhove because Oldenhove describes a different composition. The claims would also not have been obvious because Oldenhove provides no suggestion for the mixture as claimed.

Withdrawal of the rejections based on Oldenhove is requested.

With respect to the double patenting rejection in view of U.S. Patent No. 6,680,412 the claims of the '412 patent claim alcohol alkoxylate of formula (1) as well as detergents, formulations and processes for preparing those.

Claim 16 of the present application, however, defines A mixture of ethoxylates of C₄₋₆-alkylglycols -or diglycols which, on average, have a degree of ethoxylation of from 1 to 8 based on the C₄₋₆ alkylglycols or -diglycols, AND nonionic surfactants chosen from

ethoxylates of C₉₋₂₀-alkanols which, on average, have a degree of ethoxylation of from 3 to 30, and mixtures thereof. Such a mixture is not suggested by the claims of the '412 patent.

The '412 patent claims are not the same as nor otherwise suggest the specific mixture defined in claim 16 nor that the specific mixture as set forth in claim 16 yields improved interfacial tension; static and dynamic properties to aqueous solutions (see Examples 1 and 2).

To reiterate what the improvements the Examples demonstrate.

Example 1 demonstrates that the combination as claimed yielded an improved interfacial tension at equilibrium of 39 mN/m which is achieved in 0.4 seconds. In contrast, when mixing C₁₃₋₁₅ oxoalcohol ethoxylate with an average degree of ethoxylation of 7 and cumene sulfonate does not effect the position or dynamic of the surfactant solution. Example 1 also shows that adding hexylglycol ethoxylate permits lowering the amount of non-ionic surfactant and also the interfacial tension is high, being reached in about 0.7 seconds.

Example 2 shows that the specific mixture of Claim 16 makes it possible to achieve an interfacial tension of 43 mN/m in only 0.2 seconds (formulation B) whereas comparative formulation (A) with the same composition but for cumene sulphonate used in place of hexyl glycol ethoxylate with a degree of ethoxylation of 4. Formulation A in equilibrium yielded an interfacial tension of 50 mN/m after 0.5 seconds.

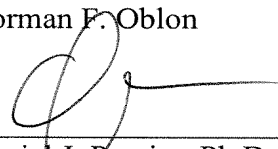
Accordingly, the claims of the present application are not obvious in view of the claims of U.S. '412 patent and as such withdrawal of this rejection is again requested.

A Notice of Allowance is requested for all pending claims. Should the Examiner deem that any further action is required to place this application in even better form for allowance, he is invited to contact the Applicants' undersigned representative.

Respectfully submitted,

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